

**MCPS K-5 Math Program**

**Parent Presentation**

**October, 2019**

# Meeting Outcomes:

- Provide parents with an overview of the new math curriculum (Eureka Math)
- Have parents participate in a few lesson activities.
- Provide parents with parent resources for the new curriculum.

# Why A Shift In Our Curriculum?

- In order for MCPS to maintain the highest quality instructional materials for teachers and students, MCPS wants to focus on an external curriculum developed by national curriculum and assessment experts.
- Math Topics that are sequenced and build upon one another, not just within the grade level, also from one grade level to another.
- A curriculum that provides a balance of Focus, Coherence, and Rigor.
- A curriculum resource that provides parents with various resources and content information.

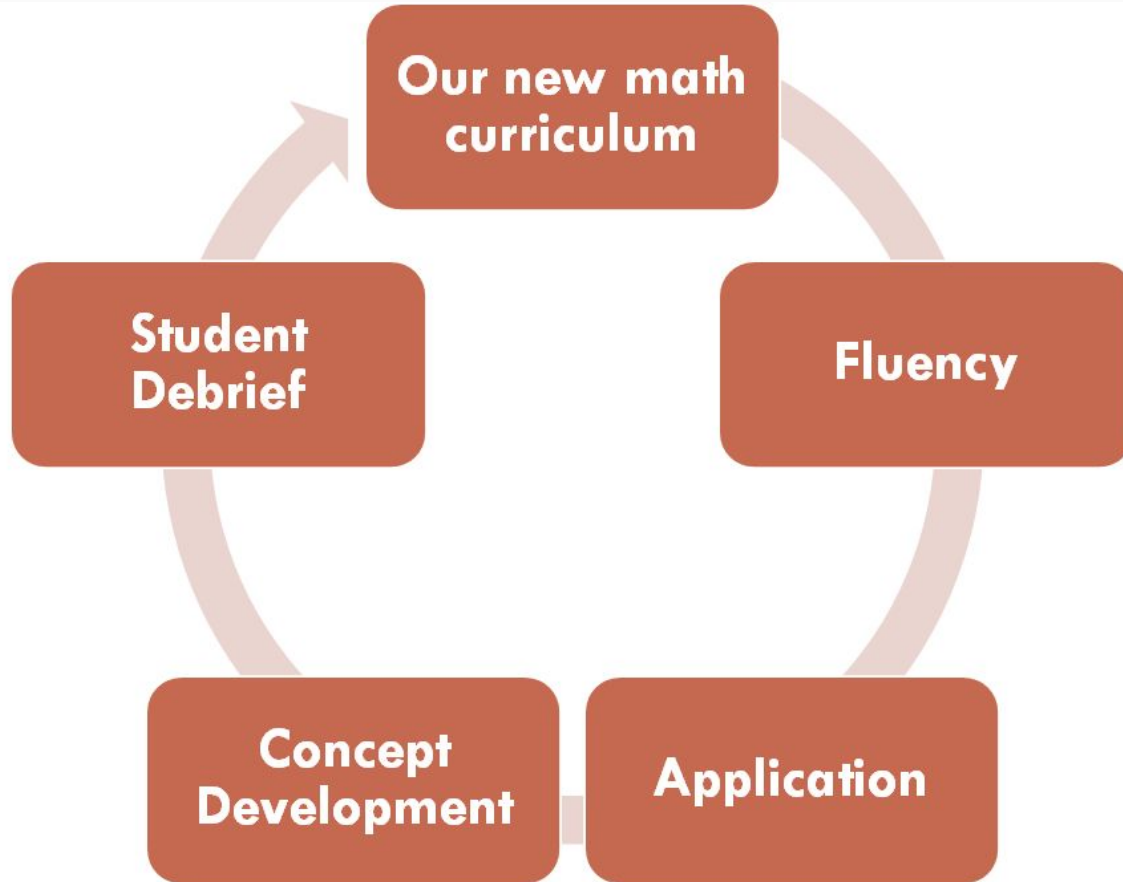
# Key Shifts in Mathematics Instruction Through Common Core State Standards

- **Focus:** Greater focus on fewer topics.
- **Coherence:** Linking the topics and thinking across grade levels.
- **Rigor:** Pursue conceptual understanding, procedural skills and fluency, and application with equal intensity.

# Benefits Of Our New Math Curriculum

- Topics are sequenced intentionally and build upon one another.
- The philosophy of instruction is to teach students from the Concrete - Pictorial - Abstract.
- Develop mathematical thinkers and not just answer getters.
- A curriculum that provides a balance of Focus, Coherence, and Rigor.
- A curriculum resource that provides parents with various resources and content information.

# Structure of four components



- **Fluency Practice** (10-13 minutes): Maintenance, Preparation, Anticipation. Sprints, Counting, or Whiteboard Exchange.
- **Application Problem** (6-8 minutes): typically reviews concepts already learned; can be springboard to the day's lesson.  
Read-Draw-Write Strategy
- **Concept Development:** (32 minutes) introduces new learning, fluid instruction at the concrete, pictorial, and abstract levels.
- **Student Debrief:** (10 minutes) student-centered discussion that promotes reflection on the day's learning.

# Lesson Structure

# Fluency Activities

- \*Fun!
- \*Adrenaline rich!
- \*Purposefully builds excitement!
- \*Rousing routine encourages students to do their best!
- \*Opportunities to celebrate improvement!



# Let's try a couple of Fluencies!

## Sprint



## Happy Counting



The resources listed below are provided on the greatminds website and will require parents to setup an account.

- Grade Level Specific Roadmaps
- Parent Tip Sheets
- Homework Helpers
- Online greatminds parent resources:  
Set up a parent account at <https://greatminds.org/math/parents>  
so you can access parent resources and videos.

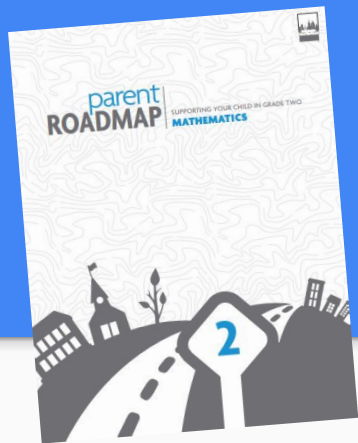
# Parent Resources

The resources listed below are provided through MCPS as additional video links that support our new Math Curriculum:

<https://www.montgomeryschoolsmd.org/uploadedFiles/schools/diamondes/classroom/Math%20Curriculum%20Video%20links.pdf>

Some of the parent video links on this document are through greatminds, you will need to create a greatminds parent account to access this video

**Additional Parent Resources**



# Grade-Level Specific Roadmaps

## What your child will be learning in grade two mathematics



In grade two, students will extend their understanding of place value to the hundreds place. They will use this place value understanding to solve word problems, including those involving length and other units of measure. Students will continue to work on their addition and subtraction skills, quickly and accurately adding and subtracting numbers up through 20 and also working with numbers up through 100. They will also build a foundation for understanding fractions by working with shapes and geometry. Activities in these areas will include:

- Quickly and accurately adding numbers together that total up to 20 or less or subtracting from numbers up through 20
- Solving one- or two-step word problems by adding or subtracting numbers up through 100
- Understanding what the different digits mean in a three-digit number
- Adding and subtracting three digit numbers
- Measuring lengths of objects in standard units such as inches and centimeters
- Solving addition and subtraction word problems involving length
- Solving problems involving money
- Breaking up a rectangle into same-size squares
- Dividing circles and rectangles into halves, thirds, or fourths
- Solving addition, subtraction, and comparison word problems using information presented in a bar graph
- Writing equations to represent addition of equal numbers



An equation is a mathematical statement that uses numbers and symbols, such as  $3 + 3 = 6$ .

## Partnering with your child's teacher

Don't be afraid to reach out to your child's teacher—you are an important part of your child's education. Ask to see a sample of your child's work or bring a sample with you. Ask the teacher questions like:

- Is my child at the level where he/she should be at this point of the school year?
- Where is my child excelling?
- What do you think is giving my child the most trouble? How can I help my child improve in this area?
- What can I do to help my child with upcoming work?

Here are just a few examples of the skills and strategies students will develop as they solve word problems in grade two.

### Grade One Mathematics

Solve word problems by adding or subtracting numbers up through 20

### Grade Two Mathematics

Solve one- and two-step word problems by adding or subtracting numbers up through 100

### Grade Three Mathematics

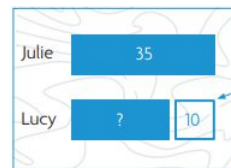
Solve two-step word problems by adding, subtracting, multiplying, or dividing numbers up through 100

Students in grade two will use diagrams such as this one to think through and solve one- and two-step word problems.

Julie has 35 books. Julie has 10 more books than Lucy. How many books does Lucy have? How many books do they have together?

**Step 1:** If Lucy has 10 less books than Julie, students first need to figure out what 10 less than 35 is.

$$35 \text{ books} - 10 \text{ books} = 25 \text{ books}$$



$$25 + 10 = 35$$

$$35 - 10 = 25$$

**Step 2:** Students then have to add the number of books Julie has to the number of books Lucy has.

$$35 \text{ books} + 25 \text{ books} = 60 \text{ books}$$



$$35 + 25 = 60$$

# Parent Tip Sheets

## EUREKA MATH TIPS FOR PARENTS

GRADE 4 | MODULE 5 | TOPIC D | LESSONS 16–21

### KEY CONCEPT OVERVIEW

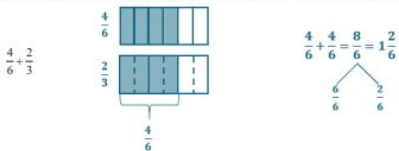
In Lessons 16 through 21, students add and subtract fractions. They use **number bonds**, **number lines**, and **tape diagrams**, as needed, to model the addition and subtraction. Students apply what they have learned to solve word problems.

You can expect to see homework that asks your child to do the following:

- Add and subtract fractions with like units (e.g.,  $\frac{3}{6} + \frac{2}{6}$ ) and unlike units (e.g.,  $\frac{2}{6} + \frac{1}{3}$ ).
- Record answers as **mixed numbers**, where applicable (e.g.,  $\frac{11}{8} = 1\frac{3}{8}$ ).
- Use the **RDW process** to solve word problems.

### SAMPLE PROBLEM (From Lesson 21)

Use a tape diagram to represent each addend. **Decompose** one of the tape diagrams to make like units. Then write the complete **number sentence**. Use a number bond to write the sum as a mixed number.



Additional sample problems with detailed answer steps are found in the *Eureka Math Homework Helpers* books. Learn more at [GreatMinds.org](http://GreatMinds.org).

### HOW YOU CAN HELP AT HOME

- Ask your child to teach you how to add and subtract fractions. Teaching you will help him to explain his thinking as he talks through the process. Ask him to explain how the models (the number bond, number line, and tape diagram) can help him solve.
- Together, find one of your child's favorite recipes. Look at the amount needed for each ingredient. Pose the following questions: What happens if we want to make two batches of the recipe instead of one? How much of each ingredient will we need?

For more resources, visit » [Eureka.support](http://Eureka.support)

GRADE 4 | MODULE 5 | TOPIC D | LESSONS 16–21

### TERMS

**Decompose/Decomposition:** To break apart into smaller parts. There are multiple ways to show decomposition, for example,  $1\frac{3}{6} = \frac{6}{6} + \frac{3}{6}$ , or  $\frac{9}{6} = \frac{6}{6} + \frac{3}{6}$ , or partitioning a tape diagram to make like units. (See Sample Problem.)

**Mixed number:** A number made up of a whole number and a fraction, for example,  $13\frac{42}{100}$ .

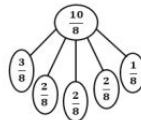
**Number sentence:** An equation for which both expressions are numerical and can be evaluated to a single number. For example,  $\frac{1}{4} + \frac{1}{4} = \frac{2}{4}$  and  $\frac{1}{10} + \frac{2}{10} + \frac{3}{10} = \frac{6}{10}$  are number sentences. Number sentences do not have unknowns.

**RDW process:** Read, Draw, Write is a three-step process used in solving word problems that requires students to read the problem for understanding, draw a model (e.g., a tape diagram) to help make sense of the problem, and write an equation and a statement of the answer.

**Unit form:** A number expressed in terms of its units. For example,  $\frac{15}{100}$  written in unit form is 1 tenth 5 hundredths or 15 hundredths.

### MODELS

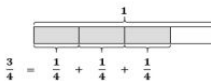
#### Number Bond



#### Number Line



#### Tape Diagram



EUREKA MATH For more resources, visit » [Eureka.support](http://Eureka.support)

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# Homework Helpers

## G4-M1-Lesson 3

1. Rewrite the following number, including commas where appropriate:

30030033003     30,030,033,003

I use a comma after every 3 digits from the right to indicate the periods, or grouping of units—ones, thousands, millions, and billions.

2. Solve each expression. Record your answer in standard form.

I can add 5 tens + 9 tens = 14 tens.

Expression	Standard Form
5 tens + 9 tens	<b>140</b>

14 tens is the same as 10 tens and 4 tens. I can bundle 10 tens to make 1 hundred. 14 tens is the same as 140.

3. Represent each addend with place value disks in the place value chart. Show the composition of larger units from 10 smaller units. Write the sum in standard form.

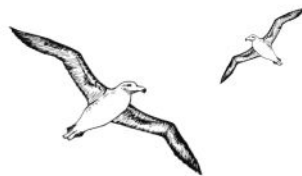
3 thousands + 14 hundreds = 4,400

millions	hundred thousands	ten thousands	thousands	hundreds	tens	ones
			●●●●	●●●●●●●●●●		

After drawing 3 thousands and 14 hundreds disks, I notice that 10 hundreds can be bundled as 1 thousand. Now, my picture shows 4 thousands 4 hundreds, or 4,400.

## GK-M1-Lesson 1

Color the things that are exactly the same. Color them so that they look like each other.

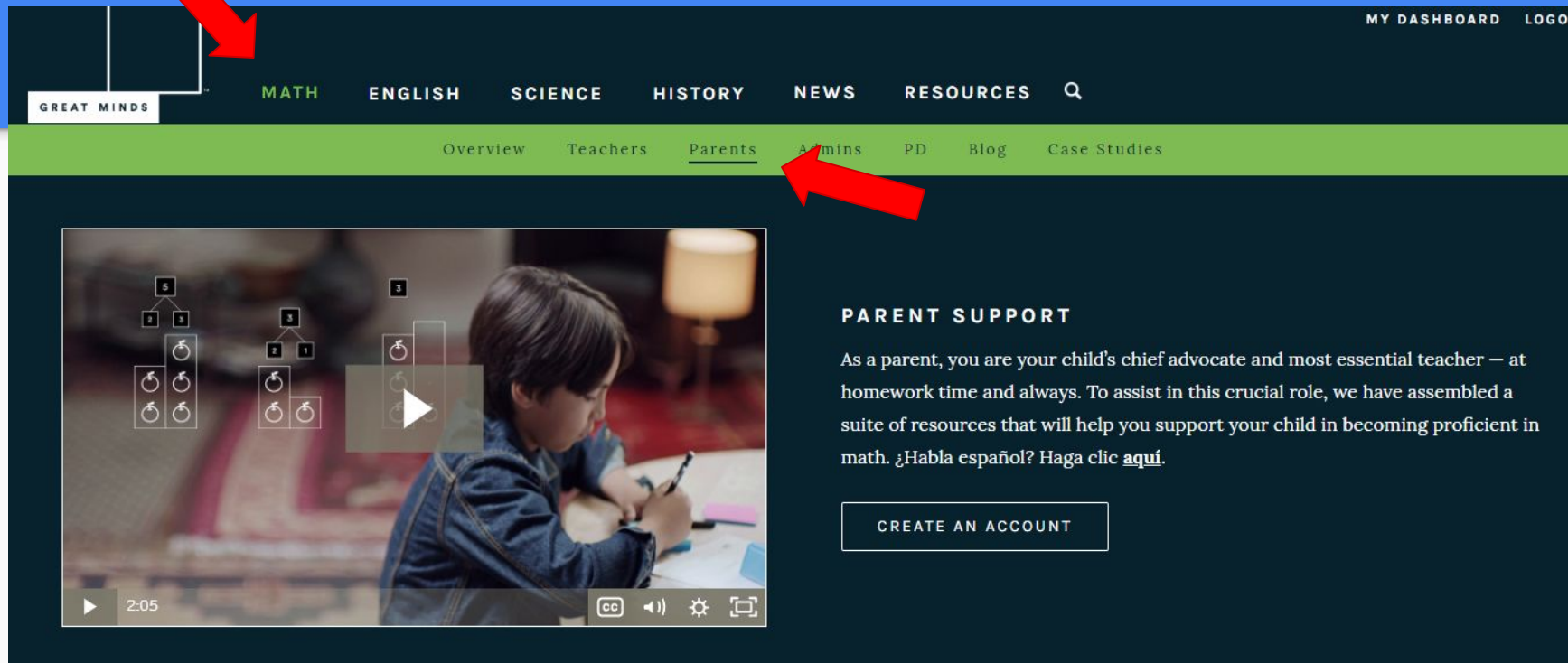


I didn't color the birds because they are not exactly the same. One is big, the other is small. Plus, they are not flying the same way.



These trees are exactly the same. They are the same kind of tree, and they are the same size. I colored them so that they look like each other.

# Where to Find Parent Resources



The image shows a screenshot of the Great Minds website. At the top, there is a dark blue header with the Great Minds logo on the left and "MY DASHBOARD" and "LOGO" on the right. Below the header is a green navigation bar with the following menu items: MATH, ENGLISH, SCIENCE, HISTORY, NEWS, RESOURCES, and a search icon. Underneath this bar is a secondary navigation bar with the following items: Overview, Teachers, Parents, Admins, PD, Blog, and Case Studies. A red arrow points from the top left towards the "MATH" menu item. Another red arrow points from the right towards the "Parents" menu item. Below the navigation bars is a video player showing a young boy sitting at a desk, writing in a notebook. The video player has a play button in the center and a progress bar at the bottom showing 2:05. To the right of the video player is a section titled "PARENT SUPPORT" with the following text: "As a parent, you are your child's chief advocate and most essential teacher — at homework time and always. To assist in this crucial role, we have assembled a suite of resources that will help you support your child in becoming proficient in math. ¿Habla español? Haga clic [aquí](#)." Below this text is a button that says "CREATE AN ACCOUNT".

GREAT MINDS

MY DASHBOARD LOGO

MATH ENGLISH SCIENCE HISTORY NEWS RESOURCES

Overview Teachers Parents Admins PD Blog Case Studies

**PARENT SUPPORT**

As a parent, you are your child's chief advocate and most essential teacher — at homework time and always. To assist in this crucial role, we have assembled a suite of resources that will help you support your child in becoming proficient in math. ¿Habla español? Haga clic [aquí](#).

CREATE AN ACCOUNT



# Where to Find Parent Resources



## SHOP

SEARCH



I AM A:

ROLE



LOOKING FOR:

SUBJECT



FREE V. PAID



GRADE



1 2 3 ... > LAST »

MATH

### EUREKA BASIC CURRICULUM FILES

This free PDF version of the *Eureka Math* basic curriculum includes over 20,000 pages and features sequenced lessons, formative assessments, and...

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### PARENT TIP SHEETS GRADE 3

FREE

To help parents address questions children may have about *Eureka Math* at home, we provide Parent Tip Sheets for Grades K through 8. Tip sheets provide an overview of each topic and include suggested strategies and models, key vocabulary, connections to previous learning, and tips for how you can support your child's learning at home. Tip Sheets are arranged in the same sequence as the student homework, making it easy for parents to follow along with their child's progress.

ADD TO DASHBOARD



# Parent Resource Videos

We will watch the Mental Math Using Number Bonds parent video to get a sense of one strategy that is used in learning math:

Intro: Mental Math Using Number Bonds (you will need to create a greatminds parent account to access this video):

[https://greatminds.org/video\\_gallery/2242/play](https://greatminds.org/video_gallery/2242/play)

# Parent Tips

- Teachers will assign work in a strategic manner where students may not be required to complete all problems on an activity/worksheet. For example, if there are 10 problems on the worksheet, the teacher may direct students only to complete #s 1, 3, 5, 7, and 9. The other problems may be used at a later time or not at all.
- **Productive Struggle-** “While we hate to see our students struggle, the level of struggle achieved by students can be beneficial when it is productive.” ~ Kyle Cantrell, *Productive Struggle in the elementary mathematics*.
- Allow your child to work through the task and attempt a few strategies of problem solving before you provide assistance. When you provide assistance, instead of giving the answer, ask guiding questions.

Questions????

# Math Presentation Evaluation

Please complete the presentation evaluation to help us learn what was helpful and what we should consider including for our next presentation.